



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/099,710	03/14/2002	Shu Lin	PU020052	2027

EXAMINER	
FLETCHER, JAMES A	

ART UNIT	PAPER NUMBER
2621	

MAIL DATE	DELIVERY MODE
01/02/2008	PAPER

7590 01/02/2008
JOSEPH S. TRIPOLI
THOMSON MULTIMEDIA LICENSING INC.
2 INDEPENDENCE WAY
P.O. BOX 5312
PRINCETON, NJ 08543-5312

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/099,710	Applicant(s) LIN ET AL.	
	Examiner James A. Fletcher	Art Unit 2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-2, 4, 8-12, 14, and 18-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Duruoz et al (6,487,642).

Regarding claims 1-2, 9, 11-12, and 19, Duruoz et al disclose a method and system for performing a trick mode on a video signal comprising:

- receiving a trick mode command (Col 6, lines 43-46 "Trick play commands are processed by buffering the command in the trick play command buffer in DRAM and setting a flag to subsequently invoke the state transition handler 80 that calls upon trick play commands subroutines");
- in response to the trick mode command, repeating a picture in the video signal to form a trick mode video signal, wherein the picture contains a display indicator (Col 7, lines 52-55 "The slow forward state 104 achieves slow forward trick plays by decrementing a counter for the number of repetitions of a frame to display between forward steps" and Col 15, lines 13-

16 "a repeat value identified in the "slow forward" exclusive command is stored into the memory of the ASIC, for use in later determinations of the speed at which the slow forward processing should proceed");

- setting the display indicator of the picture being repeated to a predetermined value (Col 6, lines 56-58 "'Slow Forward' which plays at an adjustable slow speed, which defaults to 1/10, i.e. each frame is repeatedly displayed ten times"); and
- setting the display indicators of subsequent repeated pictures of the picture being repeated to the predetermined value (Fig. 13D step 367 "Set Repeat Counter = Repeat Value").
- wherein the trick mode is a freeze mode (Col 7, lines 31-32 "The pause state 96 causes a current frame to be repeatedly displayed")

Regarding claims 4 and 14, Duruo et al disclose a method and system wherein the display indicator is set as a temporal reference field having an integer value (Col 6, lines 56-58 "'Slow Forward' which plays at an adjustable slow speed, which defaults to 1/10, i.e. each frame is repeatedly displayed ten times").

Regarding claims 8, 10, 18, and 20, Duruo et al disclose a method and system comprising implementing the receiving, repeating and both setting steps at a first location (Col 2, lines 32 "This command manager receives commands from the host" and Col 8, lines 7-8 "these internal commands include...video repeat frame" and Col 15, lines 13-14 "a repeat value identified in the 'slow forward exclusive command is stored into the memory" – these functions are performed by the command manager) and

decoding at least a portion of the trick mode video signal at a second location (Col 8, lines 9-13 "These internal commands are not generated by the host processor 39 and are instead generated by the ASIC 11, e.g., during a synchronizing routine, to accomplish things such as allowing the audio and video decoding to synchronize").

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 5 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Duruoz et al.

Regarding claims 5 and 15, Duruoz et al suggest a method and system wherein the transmission comprises at least a first reference picture and a second reference picture to predict the picture to be repeated (Col 11, line 29 "MPEG" which is known to contain multiple reference and predictive pictures), wherein each reference picture contains a display indicator (Col 6, lines 56-58 "'Slow Forward' which plays at an adjustable slow speed, which defaults to 1/10, i.e. each frame is repeatedly displayed ten times").

The Examiner takes official notice that MPEG is known to those of skill in the art to comprise multiple reference pictures and predictive pictures, as well as pictures that are both predicted and reference for other predicted pictures.

Therefore, it would have been obvious to one of ordinary skill in the art at the

time of the invention to modify Duruo et al in order to specify multiple predictive pictures for repetition in trick play modes.

6. Claims 3 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Duruo et al as applied to claims above, and further in view of Metz et al (5,978,855).

Regarding claims 3 and 13, Duruo et al suggest a method and system wherein a bi-directional predictive picture is an image that can be repeated (Col 11, line 29 "MPEG") and does not rule out the use of such a picture, but does not specifically disclose repeating of that bi-directional predictive picture.

Metz teaches the use of all frames as being available as still pictures (Col 45, lines 40-41 "all of the frames relate to a single freeze-frame image").

As suggested by Duruo et al and taught by Metz, once a frame has been decoded, it is available for repetition in a slow trick play mode, removing the need to decode another frame when it is unnecessary..

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize a bi-directional predictive picture for repetition in a freeze-frame trick-play mode.

7. Claims 6-7, and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Duruo et al as applied to claims above, and further in view of McLaren (WO 96/13121).

Regarding claims 6, 7, 16, and 17, Duruo et al disclose a method and system setting each of the display indicators as temporal reference fields having integer values (Col 6, lines 56-58 "'Slow Forward' which plays at an adjustable slow speed, which

defaults to 1/10, i.e. each frame is repeatedly displayed ten times"); but are silent regarding setting display indicators to various values.

McLaren teaches the setting of the display indicator of the second reference picture further comprises setting the integer value of the temporal reference field of the second reference picture an integer value higher than the integer value of the temporal reference field of the picture being repeatedly displayed during the trick mode to maintain a proper display order (Page 9, lines 34-37 "calculating the Presentation Time Stamp and Decode Time Stamp PTS/DTS values such that each TP I frame is presented the necessary number of frame times apart").

As suggested by Duruoz and taught by McLaren, a presentation of a given number of identical frames (still picture or slow playback) is easily accomplished by first presenting the original picture, followed by a number of identical copies of that picture. The number of copies must be less than the total number of pictures, as there is at least one original picture displayed.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to present a smaller number of copies of the picture than the total number of pictures.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James A. Fletcher whose telephone number is (571) 272-7377. The examiner can normally be reached on 7:45-5:45 M-Th, first Fridays off.


Application/Control Number:
10/099,710
Art Unit: 2621

Page 7

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Miller can be reached on (571) 272-7353. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JAF
08 December 2007



JOHN MILLER
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600